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UNITED STATES GEOLOGICAL SURVEY

TEM-31

FORTY-NINER, KING SOLOMON RIDGE,
AND WEST END CLAIMS NEAR CLANCY,
JEFFERSON COUNTY, MONTANA

By
M. R. Klepper

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without editorial and technical review or approval of its
usage of geologic names, to make the information available
to interested organizations and to stimulate the
search for uranium deposits.

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METALLURGY AND CERAMICS

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NEAR CLANCY, JEFFERSON COUNTY, MONTANA

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Location and ownership

The writer, in company of Wayne Hinman of Clancy, briefly examined the Forty-Niner, King Solomon Ridge, and West End claims on October 28, 1949. The claims cover the crest of an east-trending ridge on the north side of Clancy Creek from one to one and a half miles west of Clancy, Jefferson County, Montana. (See index map.) Mr. Hinman noted radioactivity on the north side of Clancy Creek and staked the claims during April and May 1949, and shortly thereafter optioned them to the Elkhorn Mining Company of Boulder, Montana. On October 28, 1949, the Sunshine Mining Co. of Kellogg, Idaho, had an option agreement with the Elkhorn Mining Co. to do exploratory work.

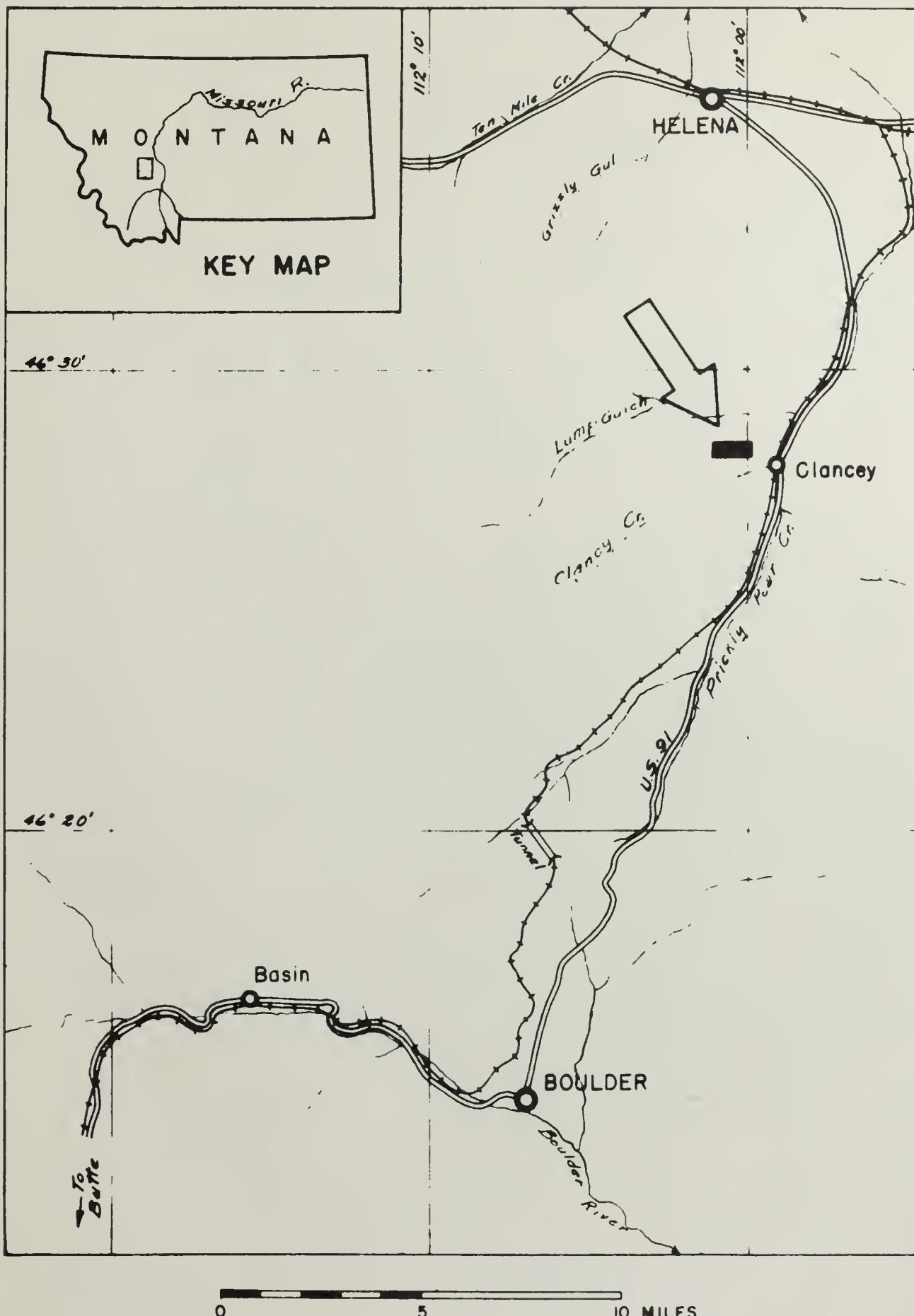
Geology

The crest of the ridge is mostly, if not wholly, composed of light-colored aplitic granite that appears to form a thick east-trending dike in quartz monzonite. The radioactivity is concentrated in and adjacent to dark gray siliceous and slightly pyritic veins that cut the aplitic granite. Fragments of radioactive aplitic granite and siliceous vein

material have been found for at least 2,000 feet along and near the ridge crest, but only one vein has been even superficially explored. Where exposed in a pit and a crosscut about 30 feet below the pit, this vein is 18 to 30 inches thick and contains a few small green platy crystals that appear to be radioactive. The vein material has an activity of about 25 times background; selected pieces were analyzed and found to contain 0.096 percent uranium. A secondary mineral of the uranite group, probably zeunerite, and a uranium carbonate, rutherfordine, were identified in the Geological Survey's laboratory.

The most radioactive material is altered aplitic granite, of which only a few float pieces have been found along the crest near the east end of the ridge. This rock contains a yellowish-green secondary radioactive mineral as sporadic thin crusts or fracture fillings. Although in the field it had an activity of the order of 100 times background, and radiometric analysis in Spokane indicated 0.65 percent equivalent uranium, chemical analysis showed that it contains only 0.084 percent uranium. Secondary minerals of the uranite group, probably autunite and zeunerite, were identified in the laboratory.

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY



MAP SHOWING LOCATION OF FORTY-NINER, KING SOLOMON RIDGE,
AND WEST END CLAIMS, JEFFERSON COUNTY, MONTANA

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